

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

ORDER NO. R7-2003-0046

**WASTE DISCHARGE REQUIREMENTS
AND
CLOSURE AND POST-CLOSURE MAINTENANCE
FOR
COUNTY OF SAN BERNARDINO, OWNER/OPERATOR
NEEDLES WASTE MANAGEMENT FACILITY
CLASS III LANDFILL
CLASS II SURFACE IMPOUNDMENTS
South of Needles – San Bernardino County**

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. The County of San Bernardino Solid Waste Management Division (hereinafter referred to as the discharger), 222 West Hospitality Lane, Second Floor, San Bernardino, CA 92415-0017, submitted a request to revise the Monitoring Program at the Needles Waste Management Facility (hereinafter referred to as the WMF) in March of 2002.
2. Definition of terms used in this Board Order:
 - a. Waste Management Facility (WMF) – The entire parcel of property where waste discharge operations are conducted.
 - b. Waste Management Unit (WMU) – An area of land, or a portion of a waste management facility, where waste is or was discharged. The term includes containment and ancillary features for precipitation and drainage control and monitoring.
 - c. Landfill – A waste management unit where waste is discharged to land. It does not include surface impoundments, waste piles, or land and soil treatment.
3. The WMF is located in southern California in San Bernardino County, approximately 2 miles south of the intersection of State Route 95 and Interstate 40, and 2.5 miles south of the City of Needles. The specific location of the site is the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ and S $\frac{1}{2}$ of the SE $\frac{1}{4}$ of Section 7; and the N $\frac{1}{2}$ of the NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ and N $\frac{1}{2}$ of the NE $\frac{1}{4}$ of Section 18, T8N, R23E, SBB&M as shown in Attachments A and B.
4. On November 3, 2000, the United States Government, with administration by the Bureau of Land Management (BLM), transferred the ownership of property that the WMF is located on to the County of San Bernardino.
5. On January 30, 1996, a Closure Agreement was signed between the County of San Bernardino Waste System Division and the City of Needles. The Agreement states:
 - a. The County will assume all responsibilities and perform all activities necessary for the proper cleanup and closure of the Landfill as may be required by federal, state, and local regulations.
 - b. The County will accept the Landfill into the County's Waste System and treat the Landfill like any other Landfill within the system.
6. The site is located on a dissected alluvial plain on the east side of the Sacramento Mountains. The Sacramento Mountains are an outcrop of the local bedrock referred to as the Needles Complex. The Needles Complex is composed primarily of PreCambrian diorite grading to metadiorite and crudely foliated granite grading to granodiorite.

7. The WMF overlies Quaternary older alluvial fan deposits that overlie Quaternary deposits of the ancestral Colorado River. These, in turn, overlie Tertiary claystone and siltstone. Older alluvial fan and Colorado River deposits consist of unconsolidated poorly to moderately sorted sand, sandy gravel, clayey and silty sand and sandy gravel, clay, and minor cobbles. Tertiary clay and siltstone may be a part of the Bousse Formation, a marine to brackish-water sequence deposited in an embayment of the Gulf of California.
8. The site is a 180-acre parcel of land. Approximately 50 acres were used as WMF disposal areas. The disposal areas consist of:
 - a. An old burn site
 - b. A Class III solid waste Landfill
 - c. A dead animal disposal area
 - d. Septage drying ponds
 - e. Liquid waste ponds
 - f. Chromic hydroxide sludge disposal areas

The disposal areas were not lined and had no leachate collection and removal systems.

9. The portions of the WMF that were used for Class III municipal solid waste landfilling and chromic hydroxide disposal (both hereinafter referred to as the Landfill) have the following history:
 - a. The Landfill began operation as a Sanitary Landfill, by filling pits formerly used for burning refuse, in 1967 when the BLM issued a Temporary Use Permit to San Bernardino County. In 1982, the BLM issued a 25-year Recreation and Public Purposes Act lease to the San Bernardino Solid Waste Management Division (SBSWMD). In August 1982, the City of Needles, under an agreement with SBSWMD, began operating the Landfill. Management of the site was transferred from SBSWMD to the City of Needles in August 1984.
 - b. In 1970, the Landfill started accepting chromic hydroxide sludge generated at Pacific Gas and Electric Company's Topock Compressor Station. The discharger reports that over a 10-year period, from 1973-1983, an estimated 166,500 gallons of chromic hydroxide sludge was disposed at the Landfill. Disposal of chromic hydroxide sludge at the Landfill ceased in 1984.
 - c. The discharger reports that the Landfill received approximately 72 cubic yards (yd³) per day of the following types of waste:
 - i. residential
 - ii. commercial
 - iii. construction/demolition
 - iv. dismantled cars
 - v. tires
 - vi. dead animals
10. Another portion of the WMF was used as liquid waste ponds and septage drying ponds. These ponds have also been closed. The following explains the ponds:
 - a. The unlined surface impoundments were permitted to receive up to 10,000 gallons-per-day of liquid digested sludge from the City of Needles wastewater treatment plant.
 - b. The discharger reports that the surface impoundments accepted the following:
 - i. Septic tank pumpings
 - ii. Chemical toilet effluent; 5,000 gallons-per-year
 - iii. Grease trappings; 200 gallons-per-day
 - iv. Garage and service station oil traps; 1,000 gallons-per-year
 - v. Crankcase oil; 360 gallons-per-year

11. The following Waste Discharge Requirements (WDRs) were issued to the Needles Landfill:

Board Order No. 72-039, adopted 7-13-72, issued to San Bernardino County;
Board Order No. 83-063, adopted 7-7-83, issued to the City of Needles;
Board Order No. 88-118, adopted 9-22-88, issued to the City of Needles;
Board Order No. 92-019, adopted 3-11-92, issued to the City of Needles;
Board Order No. 93-071, adopted 6-17-93, issued to the City of Needles (an amendment to Board Order No. 92-019),
Board Order No. 97-050, adopted 6-25-97, issued to San Bernardino County, and
Board Order No. R7-2002-0122, adopted 6-26-02, issued to San Bernardino County.

The Bureau of Land Management was the landowner at the site for the issuance of all the above-listed Board Orders except No. R7-2002-0122.

12. This Board Order updates Board Order No. R7-2002-0122 to incorporate changes requested by the discharger.
13. Elevations across the Landfill range between 820 feet mean sea level (msl) at the west end and 750 feet msl at the east end. Two (2) washes are located to the south and north of the Landfill. Both washes drain toward the Colorado River at approximately two (2) to three (3) percent slope in the northeast direction. The surrounding topography is relatively flat. A north-south aligned berm has been constructed to divert surface water run-on associated with these washes away from the site.
14. Annual averages for evaporation and precipitation in the area are 118 inches and 4.3 inches respectively.
15. The 100-year, 24-hour precipitation event for the site is 3.5 inches.
16. The Landfill is located above the flood plain of the Colorado River and does not lie within a flood plain of a 500-year frequency.
17. Current land uses within one (1) mile of the site are zoned as industrial and open space.
18. There are no drinking water wells within a one (1) mile radius of the site.
19. The Landfill is located in the Piute Hydrologic Unit.
20. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan) was adopted on November 17, 1993 and designates the beneficial uses of ground and surface waters in this Region.
21. The beneficial uses of ground waters in the Piute Hydrologic Unit are:
 - a. Municipal supply (MUN)
 - b. Industrial supply (IND)
 - c. Agricultural supply (AGR)
22. During the Solid Waste Assessment Test (SWAT) investigation in 1988, the City of Needles installed three (3) ground water monitoring wells; N-1, N-4 and N-2A. Ground water monitoring well N-5 was installed by the City of Needles in 1996.
23. Depth-to-ground water beneath the site ranges from approximately 80 to 170 feet below ground surface with a hydraulic gradient of 0.006 ft/ft and ground water flow is interpreted to be toward the east. There is evidence that the currently monitored aquifer is a perched zone and that a deeper aquifer may exist with ground water from 250 to 350 feet below ground surface.

24. In 1995, the BLM installed eight (8) additional ground water monitoring wells at the site as part of the site inspection. These wells are: MW-7S, MW-7D, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-13, as shown in Attachment C.
25. Monitoring well MW-11, located in the refuse prism as shown on Attachment C, was abandoned on June 20, 2001.
26. Four (4) wells were and continue to be monitored as part of the monitoring program. These wells are N-1 and N-4 (upgradient wells); N-2A and N-5 (downgradient wells).
27. On January 29, 1997, the Regional Board received a Notification of Release from the County of San Bernardino. The notification indicated a release of constituents from the WMF to the ground water.
28. The Regional Board's Executive Officer issued Cleanup and Abatement Order (CAO) No. 97-111 on August 15, 1997.
29. The discharger submitted a Final Closure/Post-Closure Maintenance Plan (FCPCMP) on October 29, 1995.
30. The following was proposed by the discharger as it was described in the FCPCMP:
 - a. Final Cover – the discharger proposes a monolithic cover as an engineered alternative to the prescriptive cover. The monolithic cover will consist of, in ascending order:
 - i. A minimum 2-foot-thick foundation layer composed of random soil materials.
 - ii. A minimum 4-foot-thick layer of random soil material that will comprise the monolithic cover.
 - b. Final Grading – Final grades are designed to prevent ponding, accommodate anticipated future settlement, and reduce runoff velocities. Final grades will be constructed with a maximum parameter slope of three (3) to one (1) and a minimum grade of three (3) percent on the top deck.
 - c. Settlement – Settlement of the refuse will be monitored by installing, at a minimum, two (2) additional permanent monuments to serve as reference points and by aerially photographing the entire permitted site at the end of the closure activities and every five (5) years throughout the post-closure maintenance period.
 - d. Final Drainage – Surface water runoff on the top deck will be directed toward berms along the top deck perimeter. The collected runoff will be conveyed along the diversion berms at one (1) to two (2) percent slopes down drain inlets and then conveyed through to the riprap energy dissipaters. The flow will then be diverted north or south of the site into a natural streambed. Also, a two (2)-foot high earthen flow diversion berm will be constructed at the center of the Landfill to intercept and direct the top deck runoff to the north and south ends of the Landfill.
 - e. Slope Protection and Erosion Control – Due to the arid climate and infrequent rainfall and the usage of native soil for the six (6)-foot thick final cover, no vegetation layer is proposed as slope protection or erosion control.
 - f. Groundwater Monitoring – The existing ground water monitoring wells listed in Monitoring and Reporting Program No. R7-2003-0046, will remain in service throughout the closure and post-closure maintenance period, or until waste no longer poses a threat to ground water as determined by the Regional Board's Executive Officer.

- g. Land Use – The closed Landfill will be designated as non-irrigated open space.
31. The discharger proposed the following for the Post-Closure Maintenance Plan:
- a. Inspection – Routine and periodic inspections will be conducted by the discharger. At least twice a year and immediately after special events such as earthquakes, storms and fires, a thorough and comprehensive inspection will be conducted by the discharger.
 - b. Final Cover/Grading – A post-closure maintenance program will be implemented at the Landfill to ensure that the Landfill final cover and final grades retain their integrity and effectiveness. The final cover areas will be routinely evaluated and inspected for:
 - i. Evidence of Erosion
 - ii. Visible Depressions
 - iii. Pondered Water
 - iv. Odor
 - v. Exposed Refuse
 - vi. Cracks
 - vii. Settlement and Subsidence
 - viii. Slope Failure
 - ix. Leachate Seeps
- Deficiencies, damages to, and failure of the final cover and final grades will be repaired and restored within 30 days to design conditions and in accordance with construction specifications.
- c. Settlement – A mitigation plan will be submitted to the Regional Board for the Executive Officer's approval.
 - d. Drainage System – Drainage inlets and down drains will be cleaned of sediments. Drainage channels will be maintained to permit free flow and sealed or repaired to maintain structural integrity of the system. Any damage will be repaired within 30 days.
 - e. Ground Water Monitoring System – All groundwater monitoring wells will be inspected for signs of failure or deterioration during each sampling event. If damage is discovered, the nature and extent of the problem will be recorded. A decision will be made to replace or repair the well. If a well needs to be replaced, it will be properly decommissioned. Damaged wells will be scheduled for repair or replacement within one (1) month after identifying the problem.
32. As part of the corrective action plan required under CAO No. 97-111, the discharger implemented the closure plan and constructed the final cover in 1998. Final cover placement was completed on May 28, 1999.
33. Clean-up and Abatement Order No. 97-111 was rescinded on February 3, 2003.
34. In accordance with Section 15301, Chapter 3, Title 14 of the California Code of Regulations, the issuance of these WDRs, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (Public Resources Cod, Section 21000 et. seq.).
35. The monitoring and reporting requirements in Monitoring and Reporting Program No. R7-2003-0046 are necessary to determine compliance with these WDRs and to determine the facility's impacts, if any, on ground water.

36. The Board has notified the discharger and all known interested agencies and persons of its intent to update WDRs for said discharger and has provided them with an opportunity for a public meeting and an opportunity to submit comments.
37. The Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, that Board Order No. R7-2002-0122 is rescinded, and in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, the discharger shall comply with the following:

A. Specifications

1. The treatment or disposal of wastes at this facility shall not cause pollution or nuisance as defined in Section 13050 of Division 7 of the California Water Code.
2. Waste materials shall be confined to the existing footprint of the WMF as defined in Finding No. 2(a) and shown in the attached site maps.
3. The discharge shall not cause degradation of any water supply.
4. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources, shall not contact or percolate through the wastes discharged at this site.
5. The exterior surfaces of the disposal area, including the intermediate and final landfill covers, shall be graded and maintained to promote lateral runoff of precipitation and to prevent ponding.
6. The discharger shall use the constituents listed in Monitoring and Reporting Program No. R7-2003-0046 and revisions thereto, as "monitoring parameters". These monitoring parameters are subject to the most appropriate statistical or non-statistical tests under Monitoring and Reporting Program No. R7-2003-0046, Part III, and any revised Monitoring and Reporting Program approved by the Regional Board's Executive Officer.
7. The discharger shall implement the attached Monitoring and Reporting Program No. R7-2003-0046 and revisions thereto in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Landfill, or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste to the Landfill.
8. The discharger shall not cause the concentration of any Constituent of Concern (COC) or monitoring parameters to exceed its respective background value in any monitored medium at any Monitoring Point assigned to Detection Monitoring pursuant to Parts II.A.4 of the attached Monitoring and Reporting Program No. R7-2003-0046.
9. The discharger shall follow the Water Quality Protection Standards (WQPS) for detection monitoring established by the Regional Board in this Board Order pursuant to Title 27, Section 20390. The following are five (5) parts of WQPS as established by the Regional Board (the terms of art used in this Board Order regarding monitoring are defined in Part I of the attached Monitoring and Reporting Program No. R7-2003-0046 and revisions thereto, which is hereby incorporated by reference):
 - a. The discharger shall test for the monitoring parameters and the COCs listed in Monitoring and Reporting Program No. R7-2003-0046, and revisions thereto.

- b. Concentration Limit – The concentration limits for each monitoring parameter and COC for each monitoring point (as stated in Detection Monitoring Program Part II), shall be its background value as obtained during that reporting period.
 - c. Monitoring points and background monitoring points for detection monitoring shall be those listed in Part II.A. of the attached Monitoring and Reporting Program No. R7-2003-0046, and any revised Monitoring and Reporting Program approved by the Regional Board's Executive Officer. Monitoring and background monitoring points are shown on Attachment C.
 - d. Points of Compliance – (Section 20405, Title 27) shall be those Monitoring Points listed in Part II.B of attached Monitoring and Reporting Program No. R7-2003-0046.
 - e. Compliance Period – The estimated duration of the compliance period for this WMF is six (6) years. Each time the Standard is not met (i.e., releases discovered), the Landfill begins a compliance period on the date the Regional Board directs the dischargers to begin an Evaluation Monitoring Program. If the dischargers' Corrective Action Program (CAP) has not achieved compliance with the standard by the scheduled end of the compliance period, the compliance period is automatically extended until the WMF has been in continuous compliance for at least three (3) consecutive years.
10. The discharger shall follow the proposed Post-Closure Maintenance Plan.
 11. A thorough and comprehensive inspection shall be conducted by the discharger at least twice a year, and immediately after any special events such as earthquakes, storms, or fires.
 12. The discharger shall, within 30 days, repair and restore to design conditions, and in accordance with construction specifications, any deficiencies, damages to, or failure of the final cover, final grade, side slopes, drainage system, settlement, and monitoring systems.
 13. The discharger shall install, at a minimum, two (2) settlement monuments on the Landfill and three (3) survey monuments on the ground for monitoring refuse settlement at the Landfill. Also, the entire permitted site shall be aerially photographed at the end of the closure activities and every five (5) years throughout the post-closure maintenance period.
 14. The discharger shall remove and relocate any wastes that are discharged at this site in violation of these requirements.
 15. Water used for site maintenance shall be limited to amounts necessary for dust control.
 16. The Landfill shall be protected from any washout or erosion of wastes or covering material, and from any inundation, which could occur as a result of floods having a predicted frequency of once in 100 years.
 17. The discharge shall not cause the release of pollutants or waste constituents in a manner which could cause a condition of contamination or pollution to occur, as indicated by the most appropriate statistical (or non-statistical) data analysis method and retest method listed in Part III of the attached Monitoring and Reporting Program No. R7-2003-0046, and revisions thereto.

B. Prohibitions

1. Discharge of any waste to the WMF is prohibited.

C. Provisions

1. The discharger shall comply with Monitoring and Reporting Program No. R7-2003-0046, and future revisions thereto, as specified by the Regional Board's Executive Officer.

2. The discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.
3. In the event of any change in ownership of land or change in operation of the WMF, the discharger shall:
 - a. Notify the Regional Water Quality Control Board of such changes, and
 - b. Transmit a copy of this Board Order to succeeding owner or operator, and file a copy of the transmittal letter with the Regional Water Quality Control Board.
4. The discharger shall notify the Regional Board, in writing, of any proposed change in responsibility for post-closure maintenance.
5. This Board Order does not authorize violation of any federal, state, or local laws or regulations.

6. The discharger shall allow Regional Water Quality Control Board staff, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the premises regulated by this Board Order, or the place where records must be kept under the conditions of this Board Order;
 - c. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Board Order;
 - d. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Board Order; and
 - e. Sample or monitor, at reasonable times, for the purpose of assuring compliance with this Board Order or as otherwise authorized by the California Water Code, any substances or parameters at this location.
7. The discharge shall neither cause nor contribute to the contamination or pollution of ground water via the release of waste constituents in either liquid or gaseous phase.
8. The discharger shall not cause any increases in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil or other geologic materials outside the Landfill, if such waste constituents could migrate to waters of the State in either the liquid or the gaseous phase, and cause conditions of contamination or pollution.
9. This Board Order does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
10. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the California State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the USEPA.
11. All regulated disposal systems shall be readily accessible for sampling and inspection.

12. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.
13. The discharger is the responsible party for the WDRs and the monitoring and reporting program for the facility. The discharger shall comply with all conditions of these WDRs. Violations may result in enforcement actions, including Regional Board Orders or Court Orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these WDRs by the Regional Board.
14. The discharger shall furnish, under penalty of perjury, technical monitoring program reports, and such reports shall be submitted in accordance with the specifications prepared by the Regional Board's Executive Officer. Such specifications are subject to periodic revisions as may be warranted.
15. All containment structures and erosion and drainage control systems shall be designed and constructed under direct supervision of a California Registered Civil Engineer or Certified Engineering Geologist, and shall be certified by the individual as meeting the prescriptive standards and performance goals of Title 27.
16. After a significant earthquake event, the discharger shall:
 - a. Immediately notify the Regional Water Quality Control Board by phone; and
 - b. Within seven (7) days, submit to the Regional Water Quality Control Board, a detailed post-earthquake report describing any physical damages to the containment features, ground water monitoring and/or leachate control facilities and a corrective action plan to be implemented at the landfill.
17. The discharger shall immediately notify the Regional Water Quality Control Board of any flooding, slope failure or other change in site conditions, which could impair the integrity of waste containment facilities or of precipitation and drainage control structures. The discharger shall submit to the Regional Water Quality Control Board, within 14 days, a detailed report describing any physical damage to the cover, surface water diversion systems or ground water monitoring systems.
18. The discharger shall maintain visible monuments identifying the boundary limits of the entire waste management facility.
19. The discharger shall submit a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) to be covered under the Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 97-03-DWQ, NPDES No. CAS000001. The discharger shall comply with all the discharge prohibitions, receiving water limitations, and provisions of the General Permit.
20. The discharger shall submit a sampling and monitoring plan for storm water discharges to the Regional Board's Executive Officer for review and approval no later than 90 days after the adoption of this Board Order. The plan shall meet the minimum requirements of Section B, Monitoring and Reporting Requirements of the Statewide General NPDES Permit for Storm

Water Discharges Associated with Industrial Activities, Order No. 97-03-DWQ, NPDES No. CAS000001.

21. Within 180 days of the adoption of this Board Order, the discharger shall submit to the California Integrated Waste Management Board, in accordance with Title 27, Chapter 6, assurance of financial responsibility in an amount acceptable to the Regional Board's Executive Officer for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill.

22. This Board Order is subject to Regional Board review and updating, as necessary, to comply with changing state or federal laws, regulations, policies, or changes in the discharger characteristics.

I, Philip A. Gruenberg, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 7, 2003.

Executive Officer